



CONTENTS OF VOLUME 52

Number 1

Papers

- 1 Modification of granular potato starch by multiple deep-freezing and thawing
J. SZYMONSKA, F. KROK, E. KOMOROWSKA-CZEPIRSKA & K. RĘBILAS (KRAKÓW, POLAND)
- 11 Miconazole-loaded 6-oxochitin–chitosan microcapsules
I. GENTA, P. PERUGINI, T. MODENA, F. PAVANETTO (PAVIA, ITALY), F. CASTELLI (CATANIA, ITALY),
R. A. A. MUZZARELLI, C. MUZZARELLI (ANCONA, ITALY) & B. CONTI (PAVIA, ITALY)
- 19 Preparation and in vitro anticoagulant activities of alginate sulfate and its quaternized derivatives
HUANG RONGHUA, DU YUMIN & YANG JIANHONG (WUHAN, PEOPLE'S REPUBLIC OF CHINA)
- 25 Studies on downstream processing of pullulan
DHARMENDRA K. KACHHAWA, PARAMITA BHATTACHARJEE & REKHA S. SINGHAL (MUMBAI,
INDIA)
- 29 Structure and thermomechanical properties of extruded amylopectin–sucrose systems
I. A. FARHAT, Z. MOUSIA & J. R. MITCHELL (LOUGHBOROUGH, UK)
- 39 N-methylene phosphonic chitosan. Effect of preparation methods on its properties
V. M. RAMOS, N. M. RODRÍGUEZ, M. F. DÍAZ, M. S. RODRÍGUEZ (BAHÍA BLANCA, ARGENTINA),
A. HERAS (MADRID, SPAIN) & E. AGULLÓ (BAHÍA BLANCA, ARGENTINA)
- 47 Effect of acetylation on physico-chemical properties of bacterial and algal alginates in physiological sodium
chloride solutions investigated with light scattering techniques
T. WINDHUES & W. BORCHARD (DUISBURG, GERMANY)
- 53 Fourier transform infrared microspectroscopic study of the chemical microstructure of corn and oat flour-
based extrudates
DIRK RAINER CREMER & GÖNÜL KALETUNÇ (COLUMBUS, OH, USA)
- 67 Rheological properties of inulin–waxy maize starch systems
J. E. ZIMERI & J. L. KOKINI (NEW BRUNSWICK, NJ, USA)

Book Reviews

- 87 Near-infrared applications in biotechnology
- 87 Clinical and forensic applications of capillary electrophoresis
- 88 Wheat Flour
- 88 Antioxidants in food: practical applications
- 89 Plant Biopolymer Science: Food and Non-food Applications
- 89 Creating new foods: the product developers guide
- 91 Bibliography
- 99 Calendar

Number 2**Papers**

- 101 Starch films reinforced with mineral clay
H.-M. WILHELM, M.-R. SIERAKOWSKI, G. P. SOUZA & F. WYPYCH (CURITIBA, BRAZIL)
- 111 Hydrodynamic characterisation of chemically degraded hyaluronic acid
SANYA HOKPUTSA, KORNELIA JUMEL (LOUGHBOROUGH, UK), CATHERINE ALEXANDER (EDINBURGH, UK) & STEPHEN E. HARDING (LOUGHBOROUGH, UK)
- 119 Heterogeneous N-deacetylation of squid chitin in alkaline solution
PAWADEE METHACANON, MALINEE PRASITSILP, THANAWIT POTHSREE (PATHUMTHANI, THAILAND) & JUNYA PATTARAARCHACHAI (BANGKOK, THAILAND)
- 125 Calcium-mediated gelation of an olive pomace pectic extract
SUSANA M. CARDOSO (BRAGANÇA, PORTUGAL), MANUEL A. COIMBRA & J. A. LOPES DA SILVA (AVEIRO, PORTUGAL)
- 135 Galactose branching modulates the action of cellulase on seed storage xyloglucans
MARCO AURÉLIO SILVA TINÉ, DENIS UBEDA DE LIMA (CAMPINAS, BRAZIL) & MARCOS SILVEIRA BUCKERIDGE (SÃO PAULO, BRAZIL)
- 143 Mechanical properties of gels formed by mixtures of mucilage gum (*Opuntia ficus indica*) and carrageenans
L. MEDINA-TORRES, E. BRITO-DE LA FUENTE (MÉXICO, MEXICO), B. TORRESTIANA-SANCHEZ (VERACRUZ, MEXICO) & S. ALONSO (LEON, MEXICO)
- 151 Molecular weight effects on solution rheology of pullulan and mechanical properties of its films
ATHINA LAZARIDOU, COSTAS G. BILIADERIS & VASSILIS KONTOGIORGOS (THESSALONIKI, GREECE)
- 167 Ca-alginate as a support for Pb(II) and Zn(II) biosorption with immobilized *Phanerochaete chrysosporium*
M. YAKUP ARICA (KIRIKKALE, TURKEY), ÇIGDEM ARPA (ANKARA, TURKEY), AYSUN ERGENE (KIRIKKALE, TURKEY), GÜLAY BAYRAMOGLU (KIRIKKALE, TURKEY) & ÖMER GENÇ (ANKARA, TURKEY)
- 175 Characterisation of water-soluble galactoglucomannans from Norway spruce wood and thermomechanical pulp
S. WILLFÖR, R. SJÖHOLM (TURKU/ABO, FINLAND), C. LAINE (ESPPO, FINLAND), M. ROSLUND, J. HEMMING & B. HOLMBOM (TURKU/ABO, FINLAND)
- 189 Dilute and semi-dilute solution properties of an exopolysaccharide from *Escherichia coli* strain S61
YILONG REN, PETER R. ELLIS (LONDON, UK), IAN W. SUTHERLAND (EDINBURGH, UK) & SIMON B. ROSS-MURPHY (LONDON, UK)

Book Reviews

- 197 Gums and Stabilisers for the Food Industry 11
- 197 Polymeric Biomaterials (2nd Edition)
- 198 Genetic Techniques
- 198 Polysaccharide Gums from Agricultural Products
- 201 Bibliography
- 205 Calendar

Number 3**Papers**

- 207 Physicochemical properties of common and waxy corn starches oxidized by different levels of sodium hypochlorite
YA-JANE WANG & LINFENG WANG (FAYETTEVILLE, AR, USA)

- 219 Synthesis of chitosan derivatives bearing cyclodextrin and adsorption of *p*-nonylphenol and bisphenol A
NOBUYOSHI AOKI, MICHIKO NISHIKAWA & KENJIRO HATTORI (KANAGAWA, JAPAN)
- 225 Morphological characterization of the phase behavior of inulin–waxy maize starch systems in high moisture environments
J.E. ZIMERI & J.L. KOKINI (NEW BRUNSWICK, NJ, USA)
- 237 Changes of banana starch by chemical and physical modification
KRZYSZTOF N. WALISZEWSKI, MARIA A. APARICIO (VERACRUZ, MEXICO), LUÍS A. BELLO (MÉXICO DF, MEXICO) & JÓSE A. MONROY (VERACRUZ, MEXICO)
- 243 Constitutive modeling of β -glucan/amylodextrin blends
JEFFREY A. BYARS, CRAIG J. CARRIERE & GEORGE E. INGLETT (PEORIA, IL, USA)
- 253 Physicochemical properties of Canadian oat starches
R. HOOVER, C. SMITH, Y. ZHOU & R.M.W.S. RATNAYAKE (NEWFOUNDLAND, CANADA)
- 263 Starch complexes with bismuth (III) and (V)
MAIGORZATA BACZKOWICZ, DOROTA WÓJTOWICZ (CRACOW, POLAND), JAMES W. ANDEREGG (AMES, IA, USA), CHRISTOPHER H. SCHILLING (MICHIGAN, USA) & PIOTR TOMASIK (CRACOW, POLAND)
- 269 Partial fractionation of wheat starch amylose and amylopectin using zonal ultracentrifugation
MAHSA MAJZOobi, ARTHUR J. ROWE (LOUGHBOROUGH, UK), MARTIN CONNOCK (WOLVERHAMPTON, UK), SANDRA E. HILL & STEPHEN E. HARDING (LOUGHBOROUGH, UK)
- 275 In vitro digestibility studies of cereal flours and starches using purified finger millet (*Eleusine coracana*, ragi, Indaf-15) amylases
M. NIRMALA & G. MURALIKRISHNA (KARNATAKA, INDIA)
- 285 Extraction and characterization of polysaccharides from green and roasted *Coffea arabica* beans
A. OOSTERVELD, J.S. HARMSEN, A.G.J. VORAGEN & H.A. SCHOLS (WAGENINGEN, THE NETHERLANDS)
- 297 Rheological and thermal characterization of *Okenia hypogaea* (Schlech. & Cham.) starch
E. GONZÁLEZ-REYES, G. MÉNDEZ-MONTEALVO, J. SOLORZA-FERIA (MORELOS, MEXICO), J.F. TORO-VAZQUEZ (SAN LUIS POTOSÍ, MEXICO) & L.A. BELLO-PÉREZ (MORELOS, MEXICO)
- 311 Radiation modification of starch-based plastic sheets
MAOLIN ZHAI (BEIJING, PEOPLE'S REPUBLIC OF CHINA), FUMIO YOSHII & TAMIKAZU KUME (TAKASAKI-SHI, JAPAN)
- 319 Rapid preparation of starch esters by high temperature/pressure reaction
R.L. SHOGREN (PEORIA, IL, USA)
- 327 Structures and rheological properties of corn starch as affected by acid hydrolysis
YA-JANE WANG (FAYETTEVILLE, AR, USA), VAN-DEN TRUONG (RALEIGH, NC, USA) & LINFENG WANG (FAYETTEVILLE, AR, USA)

Letter to Editor

- 335 Letter to Editor of "Carbohydrate Polymers"—comments on a recent paper by Onweluzo and Co-workers
SIMON B. ROSS-MURPHY (LONDON, UK), QI WANG (GUELPH, ONT., CANADA) & PETER R. ELLIS (LONDON, UK)

Book Reviews

- 337 Food protein analysis: quantitative effects on processing
- 337 Food chemical safety—volume 2: additives
- 338 Food Intolerance and the Food Industry
- 338 Springer Handbook of Enzymes Volume 1, Class 5. Isomerases
- 341 Bibliography
- 345 Calendar

Number 4**Papers**

- 345 Preparation and characterization of arabinoxylan esters and arabinoxylan ester/cellulose ester polymer blends
CHARLES M. BUCHANAN, NORMA L. BUCHANAN, JOHN S. DEBENHAM (KINGSPORT, TN, USA), PAUL GATENHOLM, MARIA JACOBSSON (GÖTEBORG, SWEDEN), MICHAEL C. SHELTON, THELMA L. WATTERSON & MATHEW D. WOOD (KINGSPORT, TN, USA)
- 359 Effect of acetylation on the material properties of glucuronoxylan from aspen wood
MARIA GRÖNDAL (GÖTEBORG, SWEDEN), ANITA TELEMAN (STOCKHOLM, SWEDEN) & PAUL GATENHOLM (GÖTEBORG, SWEDEN)
- 367 Seed storage hemicelluloses as wet-end additives in papermaking
DENIS U. LIMA (SÃO PAULO, SP, BRAZIL), RUBENS C. OLIVEIRA (VIÇOSA, MG, BRAZIL) & MARCOS S. BUCKERIDGE (SÃO PAULO, SP, BRAZIL)
- 375 Diffusion of KCl in an amylose film
RITVA HARTIKAINEN, MATTI LINDSTRÖM (LAPPEENRANTA, FINLAND) & PIRKKO FORSELL (ESPoo, FINLAND)
- 381 Mode of action of *Fusarium moniliforme* endopolygalacturonase towards acetylated pectin
E. BONNIN, A. LE GOFF (NANTES, FRANCE), G.-J. W. M. VAN ALEBEEK, A. G. J. VORAGEN (WAGENINGEN, THE NETHERLANDS) & J.-F. THIBAUT (NANTES, FRANCE)
- 389 Synthesis and characterization of chondroitin sulfate–methacrylate hydrogels
LI-FANG WANG, SHIAU-SHUN SHEN & SHUI-CHUN LU (KAOHSIUNG, TAIWAN)
- 397 Sulfation of Chinese lacquer polysaccharides in different solvents
JIANHONG YANG, YUMIN DU, YAN WEN, TIANYU LI & LING HU (HUBEI, PEOPLE'S REPUBLIC OF CHINA)
- 405 Chemical modification, characterization and bioactivity of Chinese lacquer polysaccharides from lac tree *Rhus vernicifera* against leukopenia induced by cyclophosphamide
JIANHONG YANG & YUMIN DU (WUHAN, CHINA)
- 411 Why oxalic acid protects cellulose during ozone treatments
M. BLANCA RONCERO, J. F. COLOM & T. VIDAL (TERRASSA, SPAIN)
- 423 Structure of the exudate gum from *Meryta sinclairii*
IAN M. SIMS & RICHARD H. FURNEAUX (LOWER HUTT, NEW ZEALAND)
- 433 Some studies on characterization of three phase partitioned chitosan
APARNA SHARMA, KALYANI MONDAL & MUNISHWAR NATH GUPTA (NEW DELHI, INDIA)
- 439 Rheological and molecular properties of water soluble (1,3) (1,4)- β -D-glucans from high- β -glucan and traditional oat lines
MIRELA COLLEONI-SIRGHIE, IGOR V. KOVALENKO, JENNI L. BRIGGS, BRUCE FULTON & PAMELA J. WHITE (AMES, IA, USA)

Short Communication

- 449 A combined FT-IR microscopy and principal component analysis on softwood cell walls
RITSUKO HORI & JUNJI SUGIYAMA (KYOTO, JAPAN)
- 455 Calendar
- 457 Volume contents

